ATTACHMENT A

Charter for the Fact Finding Panel to Review Issues Surrounding the Camp Lejeune Water Supply from 1980-1985

A. Official Designation: Fact Finding Panel to Review Issues Surrounding the Camp Lejeune Water Supply from 1980-1985 (Panel).

B. Objective and Scope of Activity: Conduct an independent review of the facts surrounding the decisions made following the 1980 discovery of volatile organic compounds in drinking water at Marine Corps Base, Camp Lejeune. The Panel shall focus its efforts on, but not be limited to, the period beginning with the 1980 discovery of volatile organic compounds in some of the base's drinking water and concluding with the closure of affected wells in 1985. The Panel shall report its findings, in writing, to the Commandant of the Marine Corps.

C. Period of Time Required: The Panel shall commence its work on a date selected by the Commandant of the Marine Corps. It is estimated that the Panel will require six months after work commences.

D. Official to Whom the Panel Reports: The Commandant of the Marine Corps.

E. Membership: The panel will be composed of three core members. The Honorable Ronald Packard will serve as Panel Chair. The Honorable Robert Pirie, Jr. and General Richard Hearney (USMC, Retired) complete the Panel's core membership. The Panel may also appoint additional independent experts to assist in their review, as appropriate.

F. Duties and Responsibilities: The Panel shall conduct an independent review of the facts surrounding the decisions made following the 1980 discovery of volatile organic compounds in drinking water at Marine Corps Base, Camp Lejeune. The Panel shall focus its efforts on, but not be limited to, the period beginning with the 1980 discovery of volatile organic compounds in some of the base's drinking water and concluding with the closure of affected wells in 1985. The Panel shall conduct its review in a reasonable and appropriate manner consistent with this Charter. The review shall include, but not be limited to, interviews with current and past base personnel and representatives of cognizant regulatory agencies.

The Panel is urged to consider soliciting public comment in fulfilling its duties.

The Panel shall report its findings, in writing, to the Commandant of the Marine Corps within an estimated six months after commencing its review. The Panel is solely responsible for the report's contents. The form of this report shall be reasonable and appropriate, as determined by the Panel.

G. Support Agency: Headquarters, Marine Corps will provide funding for the Panel. Headquarters, Marine Corps will provide the Panel with logistical and other staff support upon the Panel's request.

H. Funding: Headquarters, Marine Corps will provide funding to establish and support the Panel.

I. Number of Meetings: The Panel will meet as often as necessary to fulfill its duties within an estimated six months after commencement.

J. Termination Date: The Panel shall terminate thirty days after submitting its report to the Commandant of the Marine Corps.

ATTACHMENT B

Panel Biographical Summaries

Hon. Ronald C. Packard, Chairman – Mr. Packard represented California's 48th District in the United States House of Representatives until from 1982 to 2001. He served on the Appropriations Committee, where he chaired the subcommittees on Energy and Water Development; Military Construction; and the Legislative Branch. Mr. Packard also held seats on the Public Works and Transportation and the Science, Space and Technology committees. Before his election to Congress, he served as mayor of Carlsbad, Calif.

Jerome B. Gilbert, P.E. – Mr. Gilbert advises on water management, treatment and protection issues, as well as groundwater remediation, for municipal and state governments and federal agencies. Before forming his own consulting engineering firm in 1991, he was general manager and chief engineer of the East Bay Municipal Utility District in California. Earlier, as executive officer of the California State Water Resources Control Board, he helped develop laws that were the basis for the federal Clean Water and Safe Drinking Water acts. He is familiar with water system practices worldwide and holds leadership positions in a number of industry organizations.

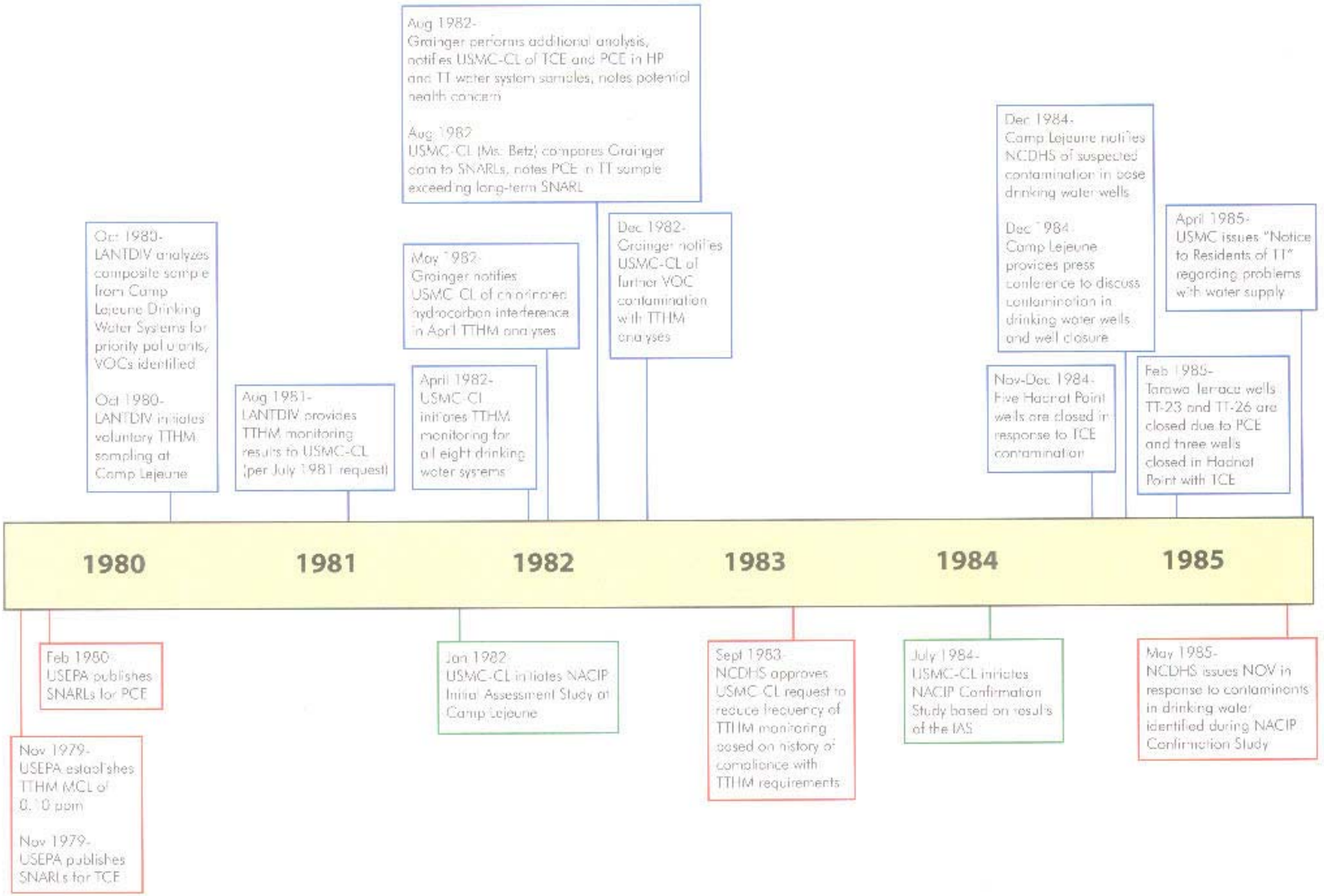
Gen. Richard D. Hearney (USMC, Ret). – Gen. Richard D. Hearney, USMC (Ret.), served in the military for 35 years before retiring as Assistant Commandant of the Marine Corps and joining the Boeing Company as Vice President for Military Aircraft and Missile Systems Group. Gen. Hearney then served as President and CEO of Business Executives for National Security (BENS), a national, nonpartisan organization of business leaders. An aviator and combat veteran in Vietnam and Desert Shield and Desert Storm, Gen. Hearney has participated in a number of special security studies and commissions, including the National Defense Panel. Most recently he was a member of the Blue Ribbon Panel that recommended ways the San Jose, California Airport can use technology to improve security; Secretary of Defense Donald Rumsfeld's Special Study of Defense Logistics; and the Council on Foreign Relations' Task Force on Non-Lethal Weapons. He currently serves on the Defense Science Board Mobility Panel.

Hon. Robert B. Pirie Jr. – Mr. Pirie has more than 40 years of experience in the armed forces, government and industry. He served as acting secretary of the Navy during 2000-2001 and was previously undersecretary of the Navy and assistant secretary of the Navy for installations and environment. Mr. Pirie's government service also included management positions with the Department of Defense with responsibility for manpower, reserve affairs and logistics, and with the Congressional Budget Office as deputy assistant director, national security. Before entering government service in 1975, he served in the United States Navy for 20 years, during which time he commanded a nuclear attack submarine.

Robert G. Tardiff, Ph.D., ATS – Dr. Tardiff is co-founder and president of The Sapphire Group, a Maryland-based company that specializes in applying scientific techniques to identifying and analyzing health risks in the environment and the workplace. Dr.

Tardiff was previously chief of the U.S. Environmental Protection Agency's Toxicological Assessment Branch and executive director of the National Academy of Sciences/National Research Council Board on Toxicology and Environmental Health Hazards. He holds a certification as a Fellow from the Academy of Toxicological Substances.

ATTACHMENT C


Aug 1982-
Grainger performs additional analysis, notifies USMC-CL of TCE and PCE in HP and TT water system samples, notes potential health concern
Aug 1982
USMC-CL (Ms. Betz) compares Grainger data to SNARLs, notes PCE in TT sample exceeding long-term SNARL
Dec 1984-
Camp Lejeune notifies NCDHS of suspected contamination in base drinking water wells
Dec 1984
Camp Lejeune provides press conference to discuss contamination in drinking water wells and well closure
April 1985-
USMC issues "Notice to Residents of TT" regarding problems with water supply
Oct 1980-
LANTDIV analyzes composite sample from Camp Lejeune Drinking Water Systems for priority pollutants; VOCs identified
Oct 1980-
LANTDIV initiates voluntary TTHM sampling at Camp Lejeune
Aug 1981-
LANTDIV provides TTHM monitoring results to USMC-CL (per July 1981 request)
May 1982-
Grainger notifies USMC-CL of chromatogram hydrocarbon interference in April TTHM analyses
April 1982-
USMC-CL initiates TTHM monitoring for all eight drinking water systems
Dec 1982-
Grainger notifies USMC-CL of further VOC contamination with TTHM analyses
Nov-Dec 1984-
Five Hadnot Point wells are closed in response to TCE contamination
Feb 1985-
Tarawa Terrace wells TT-23 and TT-26 are closed due to PCE and three wells closed in Hadnot Point with TCE
1980
1981
1982
1983
1984
1985
Feb 1980-
USEPA publishes SNARLs for PCE
Nov 1979-
USEPA establishes TTHM MCL of 0.10 ppm
Nov 1979-
USEPA publishes SNARLs for TCE
Jan 1982-
USMC-CL initiates NACIP Initial Assessment Study at Camp Lejeune
Sept 1983-
NCDHS approves USMC-CL request to reduce frequency of TTHM monitoring based on history of compliance with TTHM requirements
July 1984-
USMC-CL initiates NACIP Confirmation Study based on results of the IAS
May 1985-
NCDHS issues NOV in response to contaminants in drinking water identified during NACIP Confirmation Study

ATTACHMENT D

Summary of Analytical Data for Groundwater at Camp Lejeune

Sample Location/Source	Sample Date	Contaminant Concentration* (ug/L)		Document(s) in which data were reported*	Notes
		PCE	TCE		
Composite Sample (water from all 8 water systems)	10/1/1980	<0.07	0.005	CLW 430	Eight samples of water were composited from the following locations: Hadnot Point Bldg 20, Hadnot Point Bldg 670, Tarawa Terrace TT-38, Monford Point M-178, MCAS(H) Bldg 110, Courthouse Bay BB-190, Rifle Range RR-85, and Onslow Beach BA-138.
MOQ 2212 Paradise Point	1/29/1985		**1040.9**	CLW 1426, CLW 4546	
Paradise Point Bldg. 2600	1/31/1985		**890.9**	CLW 4546	
MOQ 2212 Cold Water	1/31/1985		**724.6**	CLW 4546	
MOQ 2212 Hot Water	1/31/1985		**612.9**	CLW 4546	
MOQ 2204 Hydrant	1/31/1985		**839.7**	CLW 4546	
Tank SLCH 4004	1/31/1985		**318.3**	CLW 4546	
Hydrant Elev. Tank S-830	1/31/1985		**849.0**	CLW 4546	
Tank S-2323	1/31/1985		**407.1**	CLW 4546	
BM 5677	1/31/1985		**981.3**	CLW 4546	
BM 5531	1/31/1985		**905.5**	CLW 4546	
MOQ 2204 Hydrant Dist. System	2/7/1985		32.4	CLW 1426, CLW 4546, CLW 4516	Distribution tap sample; treated with chlorination, filtering, and lime. No gasoline hydrocarbons indicated by purge and trap analysis.
HADNOT POINT WATER SYSTEM					
5 locations (WTP, NH-1, 1202, 65, FC-530)	10/21/1980	VOCs detected		CLW 436	Notes made during analysis of TTHMs indicate strong interference at dichlorobromomethane and state, "water is highly contaminated with low molecular weight hydrocarbons."
5 locations (WTP, NH-1, 1202, 65, FC-530)	12/18/1980	VOCs detected		CLW 438	Notes made during analysis of TTHMs indicate heavy organic interference at dichlorobromomethane.
5 locations (WTP, NH-1, 1202, 65, FC-530)	1/29/1981	VOCs detected		CLW 441	Notes made during analysis of TTHMs indicate heavy interference and state, "You need to analyze for chlorinated organics by GC/MS".
5 locations (WTP, NH-1, 1202, 65, FC-530)	2/26/1981	VOCs detected		CLW 443	Notes made during analysis of TTHMs state, "Water highly contaminated with other chlorinated hydrocarbons (solvents)!"
5 locations (not specified, but assumed to be WTP, NH-1, 1202, 65, FC-530)	April 1981 to April 1982	VOCs detected		CLW 444, CLW 446, CLW 543	Data for three rounds of TTHM sampling and analysis are available from this time period (sample collection dates are 4/14/81, 6/11/81, and 4/26/82). No comments regarding interference are made on these data reports, but CLW 543 (4/26/82) notes that reported concentrations for TTHM and bromodichloromethane "represent an upper limit on the possible" concentrations.
5 locations (not specified, but assumed to be WTP, NH-1, 1202, 65, FC-530)	6/1/1982	VOCs detected		CLW 566	Notes made during analysis of TTHMs indicate interference by an unknown compound.
5 locations (not specified, but assumed to be WTP, NH-1, 1202, 65, FC-530)	June and July 1982	VOCs detected		CLW 580, CLW 596	Data for two rounds of sampling and analyses for TTHM are available from this time period (sample collection dates are 6/28/82 and 7/28/82). No comments regarding interference are made on these data reports, but notes indicate that reported concentrations for TTHM and bromodichloromethane "represent an upper limit on the possible" concentrations.

Summary of Analytical Data for Groundwater at Camp Lejeune

Sample Location/Source	Sample Date	Contaminant Concentration* (ug/L)		Document(s) in which data were reported*	Notes
		PCE	TCE		
Bldg. 1202, Men's Room Sink	12/2/1982	VOCs detected		CLW 694	Notes made during analysis of TTHMs state, "All samples from this site show contamination from Trichloroethylene and Tetrachloroethylene."
Bldg. 1202, Men's Room Sink	8/29/1983	VOCs detected		CLW 952	Notes made during analysis of TTHMs indicate that all samples from this site exhibit contamination from both TCE and PCE.
Bldg. 20, Water Plant at Pump	12/2/1982	VOCs detected		CLW 694	Notes made during analysis of TTHMs state, "All samples from this site show contamination from Trichloroethylene and Tetrachloroethylene."
Bldg. 20, Water Plant at Pump	8/29/1983	VOCs detected		CLW 952	Notes made during analysis of TTHMs indicate that all samples from this site exhibit contamination from both TCE and PCE.
Bldg. 65, Quality Control Lab, Room 220 Sink	12/2/1982	VOCs detected		CLW 694	Notes made during analysis of TTHMs state, "All samples from this site show contamination from Trichloroethylene and Tetrachloroethylene."
Bldg. 65, Quality Control Lab, Room 220 Sink	8/29/1983	VOCs detected		CLW 952	Notes made during analysis of TTHMs indicate that all samples from this site exhibit contamination from both TCE and PCE.
Bldg 65	2/22/1985		1.0	CLW 1426	First several characters of sample location are cut off; assumed to be Bldg 65 at Hadnot Point
Bldg. FC-530, Laundry Room Sink, First Floor	12/2/1982	VOCs detected		CLW 694	Notes made during analysis of TTHMs state, "All samples from this site show contamination from Trichloroethylene and Tetrachloroethylene."
Bldg. FC-530, Laundry Room Sink, First Floor	8/29/1983	VOCs detected		CLW 952	Notes made during analysis of TTHMs indicate that all samples from this site exhibit contamination from both TCE and PCE.
Bldg. NH-1, Emergency Room Sink	12/2/1982	VOCs detected		CLW 694	Notes made during analysis of TTHMs state, "All samples from this site show contamination from Trichloroethylene and Tetrachloroethylene."
Bldg. NH-1, Emergency Room Sink	8/29/1983	VOCs detected		CLW 952	Notes made during analysis of TTHMs indicate that all samples from this site exhibit contamination from both TCE and PCE.
Distribution Point, Bldg FC-530	7/28/1982	1		CLW 592, CLW 606, 171 AR DENR 051101	This sample was analyzed qualititively for TCE; concentrations were similar to other detections in Hadnot Point samples (19-21 ug/L). PCE concentration is reported as 1 ug/L in CLW 592 and 171 AR DENR 051101, but is reported as 100 ug/L in CLW 606.
Distribution Point, Bldg NH-1	5/27/1982	15	**1400**	CLW 592, CLW 606	
FC-540 (Raw water)	12/19/1984	<10	1.2	CLW 1054, CLW 4546	
Bldg. 20 (Man-hole) Raw	7/27/1982	<1	19	CLW 592, CLW 606	The sample date reported in CLW 606 is 7/28/82.
Bldg. 20, Treated	7/27/1982	<1	21	CLW 592, CLW 606	These data are also reported in CLW 606, but the sample date is listed as 7/28/82.
Bldg. 20, Raw	12/4/1984	<10	46	CLW 1051, CLW 1054, CLW 4546, CLW 4558	In CLW 1051, the TCE concentration is reported as 0.047 mg/l. CLW 4558 labels this sample as "Bldg 20 Raw".
Bldg. 20, Treated	12/4/1984	3.9	**196**	CLW 1051, CLW 1054, CLW 4546, CLW 4558	CLW 4558 labels this sample as "Bldg 20 Trtd."

Summary of Analytical Data for Groundwater at Camp Lejeune

Sample Location/Source	Sample Date	Contaminant Concentration* (ug/L)		Document(s) in which data were reported*	Notes
		PCE	TCE		
Bldg. 20, Raw	12/10/1984		2.3	CLW 4558	
Bldg. 20, Treated	12/10/1984	<10	2.3	CLW 1054, CLW 4546	
Bldg. 20, Raw	12/13/1984	<10	<10	CLW 4546	
Bldg. 20, Raw	12/14/1984	<10	<10	CLW 4546	
Bldg. 20, Raw	12/15/1984	<10	<10	CLW 4546	
Bldg. 20, Raw	12/16/1984	<10	<10	CLW 4546	
Bldg. 20, Raw	12/17/1984	<10	<10	CLW 4546	
Bldg. 20, Raw	12/18/1984	<10	<10	CLW 4546	
Bldg. 20, Raw	12/19/1984	<10	<10	CLW 4546	
Bldg. 20	1/31/1985		**900**	CLW 4546, CLW 4558	
Bldg. 20, Treated	2/5/1985	ND	**429**	CLW 4708, CLW 4709	CLW 4708 and 4709 are handwritten notes; there are a few discrepancies between data reported in CLW 4708 and those reported in CLW 4709. CLW 4546 labels this sample as "HP".
Bldg. 20 Filter Eff. #1	2/7/1985		<2.0	CLW 1426, CLW 4546, CLW 4516	Samples analysed by purge and trap method utilizing Hall detector in the halogen mode.
Bldg. 20 Filter Eff. #2	2/7/1985		3.4	CLW 1426, CLW 4546, CLW 4516	Samples analysed by purge and trap method utilizing Hall detector in the halogen mode.
Bldg. 20 Influent	2/7/1985		<2.0	CLW 1426, CLW 4546, CLW 4516	Samples analysed by purge and trap method utilizing Hall detector in the halogen mode.
Bldg. 20 Reservoir Finished Water	2/7/1985		16.8	CLW 1426, CLW 4546, CLW 4516	Samples analysed by purge and trap method utilizing Hall detector in the halogen mode.
Bldg. 20 Treated	4/24/1985	<10	<10	CLW 4787	
Treated water at plant	7/15/1985	<10	<10	CLW 1283	
Well 601	12/4/1984	5.0	**210**	CLW 1051, CLW 1054, CLW 1917, CLW 4546, CLW 4558, CLW 4976	TCE concentration is reported as 207 ug/L in CLW 1051, CLW 1054, and CLW 4558.
Well 601	12/10/1984	4.4	**230**	CLW 1917, CLW 1054, CLW 4546, CLW 4558, CLW 4976	PCE is reported to be non-detect in CLW 4546.
Well 601	1/16/1985	<10	26	CLW 1917, CLW 4546, CLW 4558, CLW 4976	
Well 601	2/4/1985	1.5	38	CLW 1917	
Well 601	11/12/1986	ND	ND	CLW 1917	
Well 602	July 1984			CLW 4976	

Summary of Analytical Data for Groundwater at Camp Lejeune

Sample Location/Source	Sample Date	Contaminant Concentration* (ug/L)		Document(s) in which data were reported*	Notes
		PCE	TCE		
Well 602	11/30/1984	24	1600	CLW 1917, CLW 1054, CLW 4546, CLW 4558, CLW 1089, CLW 4976	PCE concentration is reported as 1,1,2,2-tetrachloroethane in CLW 1054 and 1089.
Well 602	12/10/1984	<10	540	CLW 1054, CLW 1917, CLW 4546, CLW 4976	
Well 602	12/13/1984	3.2	300/340	CLW 1093, CLW 1917, CLW 1054, CLW 4558, CLW 4976	PCE concentration is reported as ND in CLW 1917.
Well 602	11/12/1986	ND	2.2	CLW 1917, CLW 4976	
Well 603	12/4/1984	ND	4.6	CLW 1051, CLW 1054, CLW 1917, CLW 4546	TCE is reported to be non-detect in CLW 4546.
Well 603	12/10/1984	<10	<10	CLW 1917, CLW 4546	
Well 603	1/16/1985		ND	CLW 1917, CLW 4546	CLW 4546 indicates, "None detected."
Well 603	13&17 Jan 1986		ND	CLW 1917	
Well 603	4-6 Nov 1986		ND	CLW 1917	
Well 605	12/10/1984		ND	CLW 1054	No peaks. The detection limit is hard to read, but may be 10 ppb.
Well 606	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 606	Jan 1985	VOCs not detected		CLW 1650	
Well 606	Nov 1986	VOCs not detected		CLW 1650	
Well 607	Nov 1986	VOCs not detected		CLW 1650	
Well 608	12/4/1984	<10	110	CLW 1051, CLW 1054, CLW 1917, CLW 4546, CLW 4558, CLW 4976	TCE concentration is reported to be 11.0 ppb in CLW 4546.
Well 608	12/10/1984	<10	13	CLW 1054, CLW 1917, CLW 4546, CLW 4558, CLW 4976	
Well 608	2/4/1985		9	CLW 1917	
Well 608	11/12/1986		66	CLW 1917, CLW 4976	
Well 609	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 609	Jan 1986	VOCs not detected		CLW 1650	
Well 609	Nov 1986	VOCs not detected		CLW 1650	
Well 610	Feb 1985	VOCs not detected		CLW 1650	
Well 610	Jan 1986	VOCs not detected		CLW 1650	
Well 610	Nov 1986	VOCs not detected		CLW 1650	
Well 610	10/1/1992		37	CLW 3256	
Well 611	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 613	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 613	Jan 1986	VOCs not detected		CLW 1650	
Well 613	Nov 1986	VOCs not detected		CLW 1650	

Summary of Analytical Data for Groundwater at Camp Lejeune

Sample Location/Source	Sample Date	Contaminant Concentration* (ug/L)		Document(s) in which data were reported*	Notes
		PCE	TCE		
Well 614	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 616	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 616	Jan 1986	VOCs not detected		CLW 1650	
Well 616	Nov 1986	VOCs not detected		CLW 1650	
Well 620	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 620	Jan 1986	VOCs not detected		CLW 1650	
Well 620	Nov 1986	VOCs not detected		CLW 1650	
Well 621	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 622	Nov 1986	VOCs not detected		CLW 1650	
Well 627	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 628	Nov 1986	VOCs not detected		CLW 1650	
Well 629	Nov 1986	VOCs not detected		CLW 1650	
Well 632	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 632	Nov 1986	VOCs not detected		CLW 1650	
Well 633	1/16/1985	VOCs not detected		CLW 4546	
Well 634	12/4/1984	<10	<10	CLW 1917, CLW 1054, CLW 4546, CLW 4976	
Well 634	12/10/1984	<10	<10	CLW 1917, CLW 4546, CLW 4976	
Well 634	1/16/1985	10	**1300**	CLW 1917, CLW 4546, CLW 4558, CLW 4976	CLW 4546 and 4558 indicate TCE concentration is 1300 ug/L; CLW 1917 indicates TCE concentration is 10 ug/L, and methylene chloride concentration is 1300 ug/L.
Well 634	11/12/1986		ND	CLW 1917, CLW 4976	
Well 635	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 635	Jan 1986	VOCs not detected		CLW 1650	
Well 635	Nov 1986	VOCs not detected		CLW 1650	
Well 636	1/16/1985	VOCs not detected		CLW 1917, CLW 4546	
Well 636	13&17 Jan 1986	VOCs not detected		CLW 1917	
Well 637	12/4/1984	<10	<10	CLW 1054, CLW 4546, CLW 4976	
Well 637	12/10/1984	<10	<10	CLW 4546, CLW 4976	
Well 637	1/16/1985	VOCs not detected		CLW 4546, CLW 4976	
Well 638	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 638	Jan 1986	VOCs not detected		CLW 1650	
Well 638	Nov 1986	VOCs not detected		CLW 1650	
Well 639 (Old and New)	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 639 (Old and New)	Jan 1986	VOCs not detected		CLW 1650	
Well 639 (Old and New)	Nov 1986	VOCs not detected		CLW 1650	
Well 640	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	

Summary of Analytical Data for Groundwater at Camp Lejeune

Sample Location/Source	Sample Date	Contaminant Concentration* (ug/L)		Document(s) in which data were reported*	Notes
		PCE	TCE		
Well 640	Jan 1986	VOCs not detected		CLW 1650	
Well 640	Nov 1986	VOCs not detected		CLW 1650	
Well 641	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 641	Jan 1986	VOCs not detected		CLW 1650	
Well 642	12/4/1984	<10	<10	CLW 1054, CLW 4546	
Well 642	12/10/1984	<10	<10	CLW 4546	
Well 642	1/16/1985	VOCs not detected		CLW 4546	
Well 643	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 643	Nov 1986	VOCs not detected		CLW 1650	
Well 644	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 644	Nov 1986	VOCs not detected		CLW 1650	
Well 646	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 647	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 647	Nov 1986	VOCs not detected		CLW 1650	
Well 648	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 648	Nov 1986	VOCs not detected		CLW 1650	
Well 649	Feb 1985	VOCs not detected		CLW 1650	
Well 649	Nov 1986	VOCs not detected		CLW 1650	
Well 650	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 650	Nov 1986	VOCs not detected		CLW 1650	
Well 651	1/16/1985	**386**	**3200**	CLW 1917, CLW 4546, CLW 4558	
Well 651	2/4/1985	**400/397**	**18,900/17,600**	CLW 1917, CLW 4546, 52 R USMC 08021985	Split sample.
Well 651	11/12/1986	**45**	32	CLW 1917	
Well 652	1/16/1985	<10	9.0	CLW 1917, CLW 4546	
Well 652	11/12/1986		ND	CLW 1917	
Well 653	1/16/1985	<10	5.5	CLW 1917, CLW 4546	
Well 653	11/12/1986		2.6	CLW 1917	
Well 654	Feb 1985	VOCs not detected		CLW 1650	
Well 654	Jan 1986	VOCs not detected		CLW 1650	
Well 654	Nov 1986	VOCs not detected		CLW 1650	
Well 655	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
Well 655	Jan 1986	VOCs not detected		CLW 1650	
Well 655	Nov 1986	VOCs not detected		CLW 1650	
Well 660	6/6/1985		2.6	CLW 3256	
Well 661	Jan 1986	VOCs not detected		CLW 1650	
Well 661	Nov 1986	VOCs not detected		CLW 1650	
Well 662	Jan 1986	VOCs not detected		CLW 1650	
Well 662	Nov 1986	VOCs not detected		CLW 1650	

Summary of Analytical Data for Groundwater at Camp Lejeune

Sample Location/Source	Sample Date	Contaminant Concentration* (ug/L)		Document(s) in which data were reported*	Notes
		PCE	TCE		
LCH 4006	4/22/1985	<10	<10	CLW 1650, CLW 4787	
LCH 4007	1/16/1985	VOCs not detected		CLW 1650, CLW 4546	
LCH 4007	Jan 1986	VOCs not detected		CLW 1650	
LCH 4007	1/12/1998			CLW 3256	
LCH 4009	Jan 1986	VOCs not detected		CLW 1650	
LCH 4009	Nov 1986	VOCs not detected		CLW 1650	
HOLCOMB BOULEVARD WATER SYSTEM					
Bldg. 670 Reservoir	1/29/1985		8.2	CLW 1426, CLW 4546	House tap sample; treated with chlorination, filtering, and lime. No gasoline hydrocarbons indicated by purge and trap analysis. CLW 4546 identifies this sample location as "HB After Reservoir".
Bldg. 670 Treated Before Reservoir	1/29/1985		**339.8**	CLW 1426, CLW 4546	House tap sample; treated with chlorination, filtering, and lime. No gasoline hydrocarbons indicated by purge and trap analysis.
Bldg. 670 Bottom	1/31/1985		24.1	CLW 4546	
Bldg. 670 Middle	1/31/1985		25.8	CLW 4546	
Bldg. 670 Top	1/31/1985		26.8	CLW 4546	
Bldg. 670 Filter #1	2/5/1985		2.8	CLW 4708, CLW 4709	These data are from handwritten notes.
Bldg. 670 Filter #2	2/5/1985		1.5	CLW 4708, CLW 4709	These data are from handwritten notes.
Bldg 670 Reservoir Finished Water	2/7/1985		<2.0	CLW 4546, CLW 4516	
Bldg. 670 Filter Eff. #1	2/7/1985		<2.0	CLW 4546, CLW 4516	
Bldg. 670 Filter Eff. #2	2/7/1985		<2.0	CLW 4546, CLW 4516	
Bldg. 670 Influent	2/7/1985		<2.0	CLW 4546, CLW 4516	
Tap Water from Berkeley Manor Elementary School (Bldg. 5400)	1/31/1985		**1148.4**	171 AR DENR 051101, CLW 4546	This location was temporarily receiving water from the Hadnot Point Water System when this sample was collected.
Bldg. 5400 Berkley Manor Elementary School Cafeteria	2/7/1985		**135.1**	CLW 1426, CLW 4546, CLW 4516	
Well 706	4/8/1998			CLW 3256	
TARAWA TERRACE WATER SYSTEM					
Bldg TT-35, Sewage Plant	4/19/1982	VOCs detected		CLW 534, CLW 542	Office Sink
Bldg TT-35, Sewage Plant	5/19/1982				Office Sink
Bldg TT-35, Sewage Plant	5/28/1982			CLW 567	Office Sink, No indications of VOC interference
Bldg TT-35, Sewage Plant	6/24/1982			CLW 580, 581	Office Sink, No indications of VOC interference
Bldg TT-35, Sewage Plant	11/29/1982	PCE		CLW 688, 692, 693	Office Sink, Lab report: "All samples from this site show contamination from Tetrachlorethylene. "
Bldg TT-35, Sewage Plant	8/29/1983	PCE		CLW 952	Notes made during analysis of TTHMs state, "all samples from this site exhibit contamination from Tetrachloroethylene."
Bldg TT-48, TT Elem School II	4/19/1982	VOCs detected		CLW 534, CLW 542	Men's Restroom across Office
Bldg TT-48, TT Elem School II	5/19/1982				Men's Restroom across Office

Summary of Analytical Data for Groundwater at Camp Lejeune

Sample Location/Source	Sample Date	Contaminant Concentration* (ug/L)		Document(s) in which data were reported*	Notes
		PCE	TCE		
Bldg TT-48, TT Elem School II	5/28/1982			CLW 567	Men's Restroom across Office, No indications of VOC interference
Bldg TT-48, TT Elem School II	6/24/1982			CLW 580, 581	Men's Restroom across Office, No indications of VOC interference
Bldg TT-48, TT Elem School II	11/29/1982	PCE		CLW 688, 692, 693	Men's Restroom across Office, Lab report: "All samples from this site show contamination from Tetrachlorethylene. "
Bldg TT-48, TT Elem School II	8/29/1983	PCE		CLW 952	Notes made during analysis of TTHMs state, "all samples from this site exhibit contamination from Tetrachloroethylene."
Bldg TT-60, TT Elem School 1	4/19/1982	VOCs detected		CLW 534, CLW 542	Main Hall Men's Restroom Sink
Bldg TT-60, TT Elem School 1	5/19/1982				Main Hall Men's Restroom Sink
Bldg TT-60, TT Elem School 1	5/28/1982			CLW 567	Main Hall Men's Restroom Sink, No indications of VOC interference
Bldg TT-60, TT Elem School 1	6/24/1982			CLW 580, 581	Main Hall Men's Restroom Sink, No indications of VOC interference
Bldg TT-60, TT Elem School 1	11/29/1982	PCE		CLW 688, 692, 693	Main Hall Men's Restroom Sink, Lab report: "All samples from this site show contamination from Tetrachlorethylene. "
Bldg TT-60, TT Elem School 1	8/29/1983	PCE		CLW 952	Notes made during analysis of TTHMs state, "all samples from this site exhibit contamination from Tetrachloroethylene."
Bldg. STT-38, Water Plant, Raw	7/28/1982	76		CLW 590, 592, 593, 606, 607	
Bldg. STT-39A Water Plant, Treated	7/28/1982	82		CLW 590, 592, 593, 606, 607	
Bldg. STT-39A, Water Plant	4/19/1982	VOCs detected		CLW 534, CLW 542	1st Pump
Bldg. STT-39A, Water Plant	5/19/1982				1st Pump
Bldg. STT-39A, Water Plant	5/28/1982			CLW 567	1st Pump, No indications of VOC interference
Bldg. STT-39A, Water Plant	6/24/1982			CLW 580, 581	1st Pump, No indications of VOC interference
Bldg. STT-39A, Water Plant	11/29/1982	PCE		CLW 688, 692, 693	1st Pump, Lab report: "All samples from this site show contamination from Tetrachlorethylene. "
Bldg. STT-39A, Water Plant	8/29/1983	PCE		CLW 952	Notes made during analysis of TTHMs state, "all samples from this site exhibit contamination from Tetrachloroethylene."
Bldg. TT-2453, TT Exchange Gas Station	4/19/1982	VOCs detected		CLW 534, CLW 542	Gas Station Ladies Room
Bldg. TT-2453, TT Exchange Gas Station	5/19/1982				Gas Station Ladies Room
Bldg. TT-2453, TT Exchange Gas Station	5/28/1982	80		CLW 567, 592, 593, 606, 607	Gas Station Ladies Room, No initial indication of VOC interference, resampling in July showed 80
Bldg. TT-2453, TT Exchange Gas Station	6/24/1982			CLW 580, 581	Gas Station Ladies Room, No initial indication of VOC interference
Bldg. TT-2453, TT Exchange Gas Station	7/28/1982	104		CLW 590, 592, 593, 606, 607	
Bldg. TT-2453, TT Exchange Gas Station	11/29/1982	PCE		CLW 688, 692, 693	Gas Station Ladies Room, Lab report: "All samples from this site show contamination from Tetrachlorethylene. "
Bldg. TT-2453, TT Exchange Gas Station	8/29/1983	PCE		CLW 952	Notes made during analysis of TTHMs state, "all samples from this site exhibit contamination from Tetrachloroethylene."

Summary of Analytical Data for Groundwater at Camp Lejeune

Sample Location/Source	Sample Date	Contaminant Concentration* (ug/L)		Document(s) in which data were reported*	Notes
		PCE	TCE		
Tap Water	2/5/1985	**215**	8.1	CLW 2979, 171 AR DENR 051101, CLW 4708, CLW 4709, CLW 4546, CLW 5094, 52 R USMC 08021985	None of the documents in which these data were presented is the original source; CLW 2979 and 5094 indicate that the PCE concentration for this sample is 80 ug/L. CLW 4709 indicates that the TCE concentration is 8.0 ug/L, and CLW 4546 indicates that the TCE concentration is 12 ug/L. CLW 4708 and 4709 identify this sample as TT38; CLW 4546 identifies this sample as "TT".
TT Plant	2/12/1985	ND	ND	CLW 4546, CLW 5094, 52 R USMC 08021985	
TT Treated	2/19/1985	ND	ND	CLW 4546, CLW 5094, 52 R USMC 08021985, CLW 1124	This sample was analyzed by both the State of NC and by JTC Environmental Consultants. PCE and TCE were not detected by either lab (NC detection limit was 2.0 ug/L).
TT Treated	4/22/1985	1.0	<10	CLW 4787, CLW 1355	PCE was detected below the method detection limit.
TT	4/23/1985	<10	<10	CLW 4787	The lab labeled this sample as "Tarawa Terrace".
TT Finished Water (W/O New Well)	3/11/1985	<10	<10	CLW 1475, CLW 1182, CLW 1183, CLW 4558, CLW 4707	This sample was analyzed by both the State of NC and by JTC Environmental Consultants (results are presented as (NC/JTC). PCE, TCE, and DCE were not detected by either lab. CLW 1182 and CLW 4707 (NC lab results) indicate that reporting values are 2 ug/L.
TT Finished Water (Downstream of Reservoir at 24 hours)	3/12/1985	6.6/8.9	<10	CLW 1475, CLW 1182, CLW 1183, CLW 4558, CLW 4707	This sample was analyzed by both the State of NC and by JTC Environmental Consultants (results are presented as NC/JTC). TCE was not detected by either lab. CLW 1182 and CLW 4707 (NC lab results) indicate that reporting values are 2 ug/L.
TT Finished Water (Upstream of Reservoir at 24 hours)	3/12/1985	21.3/20	<10/1.1	CLW 1475, CLW 1182, CLW 1183, CLW 4558, CLW 4707	This sample was analyzed by both the State of NC and by JTC Environmental Consultants (results are presented as (NC/JTC). TCE was detected by JTC at concentrations below the method detection limit. CLW 1182 and CLW 4707 (NC lab results) indicate that reporting values are 2 ug/L.
TT Treated	6/17/1985			CLW 4806	Volatile organic analysis was conducted; only dichlorobromomethane and dibromochloromethane were detected.
TT New	6/17/1985			CLW 4806	No chlorinated compounds detected.
TT381327	6/24/1985			CLW 4806	Volatile organic analysis was conducted; only dichlorobromomethane and dibromochloromethane were detected.
TT261340	6/24/1985	**1160**	24	CLW 4806	
TT-Treated	7/1/1985			CLW 1255	Results are reported as "None" for VOCs; it's unclear whether this indicates that no analysis was performed or that VOCs were not detected
TT-Treated	7/8/1985			CLW 1255	Results are reported as "None" for VOCs; it's unclear whether this indicates that no analysis was performed or that VOCs were not detected
TT-Treated	7/15/1985	<10	<10	CLW 1283	
Well TT-23/ TT New Well	Jul-84		37	CLW 2979, CLW 5094	

Summary of Analytical Data for Groundwater at Camp Lejeune

Sample Location/Source	Sample Date	Contaminant Concentration* (ug/L)		Document(s) in which data were reported*	Notes
		PCE	TCE		
Well TT-23/ TT New Well	1/16/1985	**132**	<10	CLW 1183, CLW 4546, CLW 4558, CLW 5082, 171 AR DENR 051101, 52 R USMC 08021985, CLW 1557	CLW 4546 and CLW 5082 indicate that TCE was detected at 5.8 ug/L. CLW 4546 indicates that this sample was collected on 1/23/1985.
Well TT-23/ TT New Well	2/12/1985	**37**	1.8	CLW 1183, CLW 4546, CLW 4558, CLW 5082	CLW 1183 and CLW 4558 indicate that TCE was not detected at a detection limit of 10 ug/L.
Well TT-23/ TT New Well	2/19/1985	**26.17/<10**	53.53/<10	CLW 1475, CLW 1183, CLW 1426, CLW 4546, CLW 4558, CLW 5082, CLW 1124, CLW 1557	This sample was analyzed by both the State of NC and by JTC Environmental Consultants (results are presented as (NC/JTC).
Well TT-23/ TT New Well (Pumped 2 hours)	3/11/1985	14.9/16	<10/1.3	CLW 1475, CLW 1182, CLW 1183, CLW 4707	This sample was analyzed by both the State of NC and by JTC Environmental Consultants (results are presented as (NC/JTC). TCE was detected by JTC at concentrations below the method detection limit. CLW 1182 and CLW 4707 (NC lab results) indicate that reporting values are 2 ug/L.
Well TT-23/ TT New Well (Pumped 24 hours)	3/12/1985	**40.6/48**	<10/2.4	CLW 1475, CLW 1182, CLW 1183, CLW 4558, CLW 4707, CLW 1557	This sample was analyzed by both the State of NC and by JTC Environmental Consultants (results are presented as (NC/JTC). TCE was not detected by either lab. CLW 1182 and CLW 4707 (NC lab results) indicate that reporting values are 2 ug/L.
Well TT-23/ TT New Well	6/17/1985	VOCs not detected		CLW 4806	
Well TT-23/ TT New Well	9/25/1985	4	0.2	CLW 1557, 57 M DENR 050686, CLW 1557	Note that these are both secondary source documents. CLW 1557 reported the TCE concentration as ND.
Well TT-23/ TT New Well	1985		53	14 R DENR 300490, 21 R DENR 000992	Concentration is highest reported from multiple samplings and analyses in 1985. Source: Shriver, 1985.
Well TT-25	Jul-84		trace	CLW 2979, CLW 5094	Trace amounts were detected in this well.
Well TT-25	1/16/1985	VOCs not detected		CLW 1183, CLW 4546, CLW 4558, CLW 5082	CLW 4546 indicates this sample was collected on 1/23/1985.
Well TT-25	9/25/1985	0.43	ND	CLW 1557, 57 M DENR 050686, 21 R DENR 000992	Note that these are all secondary source documents.
Well TT-25	1985	0.43		14 R DENR 300490	Concentration is highest reported from multiple samplings and analyses in 1985. Source: Shiver, 1985.
Well TT-26	Jul-84		3.9	CLW 2979, CLW 5094	Tap water was tested.
Well TT-26	1/16/1985	**1580**	57	CLW 1183, 171 AR DENR 051101, CLW 4546, CLW 4558, CLW 5082, 52 R USMC 08021985, CLW 1557, 21 R DENR 000992	CLW 4546 indicates that this sample was collected on 1/23/1985, and PCE was detected at a concentration of 158 ug/L.

Summary of Analytical Data for Groundwater at Camp Lejeune

Sample Location/Source	Sample Date	Contaminant Concentration* (ug/L)		Document(s) in which data were reported*	Notes
		PCE	TCE		
Well TT-26	2/12/1985	3.8	<10	CLW 1183, CLW 4546, CLW 4558, CLW 5082	CLW 1183 and CLW 4558 indicate that PCE was not detected at a detection limit of 10 ug/L.
Well TT-26	2/19/1985	**55.17/64**	3.91/4.1	CLW 1475, CLW 1183, CLW 1426, CLW 4546, CLW 4558, CLW 5082, CLW 1124, CLW 1557	This sample was analyzed by both the State of NC and by JTC Environmental Consultants (results are presented as NC/JTC). CLW 1183 and CLW 4558 indicate that TCE was not detected in this sample.
Well TT-26	4/9/1985	**630**	18	CLW 1232, CLW 1244, CLW 1426, CLW 1557	Lab Notes: "Compounds were identified by matching to library mass spectra. There were not matched to standards. Concentrations were estimated as a ratio to a known internal standard."
Well TT-26	6/24/1985	**1160**	24	CLW 4806	
Well TT-26	9/25/1985	**1100**	ND	CLW 1557, 57 M DENR 050686, CLW 1557	Note that these are all secondary source documents.
Well TT-30	1/16/1985	VOCs not detected		CLW 1183, CLW 4546, CLW 4558, CLW 5082	CLW 4546 indicates this sample was collected on 1/23/1985.
Well TT-31	1/16/1985	VOCs not detected		CLW 1183, CLW 4546, CLW 4558, CLW 5082	CLW 4546 indicates this sample was collected on 1/23/1985.
Well TT-32	1/16/1985	VOCs not detected		CLW 1183, CLW 4558	
Well TT-52	1/16/1985	VOCs not detected		CLW 1183, CLW 4546, CLW 4558, CLW 5082	CLW 4546 indicates this sample was collected on 1/23/1985.
Well TT-54	1/16/1985	VOCs not detected		CLW 1183, CLW 4546, CLW 4558, CLW 5082	CLW 4546 indicates this sample was collected on 1/23/1985.
Well TT-67	1/16/1985	VOCs not detected		CLW 1183, CLW 4546, CLW 5082	CLW 4546 indicates this sample was collected on 1/23/1985.

***Notes:**

PCE = tetrachloroethylene; TCE = trichloroethylene; DCE = dichloroethylene; VC = vinyl chloride; VOC = volatile organic compound; ND = not detected (detection limit not specified).

PCE long-term SNARL of 20 ug/L was published 10 Feb 1980. TCE long-term SNARL of 75 ug/L was published 26 Nov 1979. Exceedences of SNARLs are shown in bold-faced type.

Documents that appear to be original lab reports include: CLW 430, 436, 438, 441, 443, 444, 446, 543, 566, 580, 596, 694, 952, 1093, 1124, 1182, 1232, 1244, 1283, 1426, 4787, and 4806. Documents that appear to be secondary sources of data include: 14 R DENR 300490, 21 R DENR 000992, 171 AR DENR 051101, 52 R USMC 08021985, 57 M DENR, 050686, and CLW 592, 606, 1051, 1054, 1089, 1183, 1255, 1355, 1475, 1557, 1650, 1917, 2979, 3256, 4516, 4546, 4558, 4708, 4709, 5082, and 5094.

ATTACHMENT E

Individuals Contacted by Panel

1.	Robert Alexander	NACIP Coordinator at Camp Lejeune
2.	Steve Azar	Head of Water Quality at LANTDIV during the 1980s and 1990s
3.	Bruce Babson	Chemist for Grainger Labs in the early 1980s
4.	Jim Bailey	Former Head of Environmental Support Branch, LANTDIV
5.	Elizabeth Betz	Worked at Camp Lejeune as a supervisory chemist from 1979 to mid-1995.
6.	Hoy Burns	Chemist who worked at Camp Lejeune from 1949 to 1990
7.	Bonnie Capito	Librarian in charge of the administrative records of Camp Lejeune
8.	Wallace Carter	Head of Wastewater Treatment Plants, Operator Training Programs, Potable Water, and Engineering Surveys at LANTDIV in 1979
9.	James Chen	Former water quality engineer at LANTDIV
10.	Fred Cone	Electrical engineer who worked in the Utilities Department at Camp Lejeune since 1979
11.	Jerry Ensminger	Former Marine who lived at Camp Lejeune in the 1980s
12.	Mack Frazelle	Water supervisor at Camp Lejeune since 1972
13.	Dave Goodwin	Civil engineer who worked at LANTDIV in the 1980s
14.	Paul Hubbell	Assistant Deputy Commandant, Installations and Logistics (Facilities)
15.	Melton G. Lilley	Assistant Chief of Staff of Facilities at Camp Lejeune in 1983
16.	Kenneth Millice	Colonel assigned to Camp Lejeune in the early 1980s
17.	Fred Mount	Base Maintenance Officer in 1982
18.	William Neal	Chemist at Camp Lejeune in 1980 and 1981
19.	Paul Rakowski	Civil engineer at LANTDIV in the 1980s
20.	George Reynolds	Administrator for Preventive Medicine assigned to Camp Lejeune from 1984-1985 before retiring; returned as a civilian employee in Preventive Medicine in 1986
21.	Danny Sharpe	Former employee at Camp Lejeune from 1979 to 2003
22.	Rick Shiver	Environmental regulator with North Carolina Department of Environment and Natural Resources since 1973
23.	Thomas Townsend	Former Marine who lived at Camp Lejeune
24.	William Waters	Former Marine and civilian employee at Camp Lejeune
25.	Julian Wooten	Former civilian employee at Camp Lejeune from the 1960s to the early 1990s

ATTACHMENT F

Presenters and Individuals Submitting Statements:
Drinking Water Fact-Finding Panel for Camp Lejeune
June 24-25, 2004, Public Meetings
Coastal Carolina Community College, Jacksonville, North Carolina

Mike Andrews

Joy Barker

Jeff Byron

Mary Ruth Byron (statement read by Jeff Byron)

Patsy E. Canady

Terry Dyer

Jerry Ensminger

Michael Gros

Jacquelyn A. Hammond

Ellen Harris

Charles Houssiere

Lita Hyland

Marilyn M. Livingston

Susan Matteson

Paula Orellana

Coley H. Rhodes

Barbara Trimble

William V. Waters

Johnsie Weissenstein

Martin White (statement read by Jerry Ensminger)

ATTACHMENT G

Categories and Number of Documents Retrieved

Document category	Number of Documents Retrieved
Analytical Results *Well sampling results followed by analysis of the data*	145
Applications *Well permit, well construction, water treatment plant applications*	19
Contracts *Contractual and bid and proposal documents for construction and other services*	4
Data *Well sampling data, site maps*	42
Emails *Correspondences involving Camp Lejeune, TCE, PCE and ABC Cleaners*	133
Faxes *Faxes involving Camp Lejeune, TCE, PCE and ABC Cleaners*	31
Interviews *Conversations between private investigator and key personnel involved in sampling activities at Camp Lejeune during the 1980s*	26
Letters *Correspondences from concerned citizens, interested parties, USMC, EPA, USGS, and independent laboratory companies*	580
Memos *Official memos on environmental surveys, TTHM testing, housing areas at Camp Lejeune*	265
Newspaper Articles *Historical articles published on Camp Lejeune activities*	126
Regulations *Federal Register notices, Code of Federal Regulations, State regulations*	26
Reports *Preliminary assessments, ATSDR health reports, Office of Drinking Water health advisories, EPA fact sheets, remedial investigations, feasibility studies*	131
Sampling Logs *Sampling logs of raw/ delivered water to/from treatment facilities*	96
Telephone Logs	7
Miscellaneous	15
TOTAL	**1646**

ATTACHMENT H

ATTACHMENT H

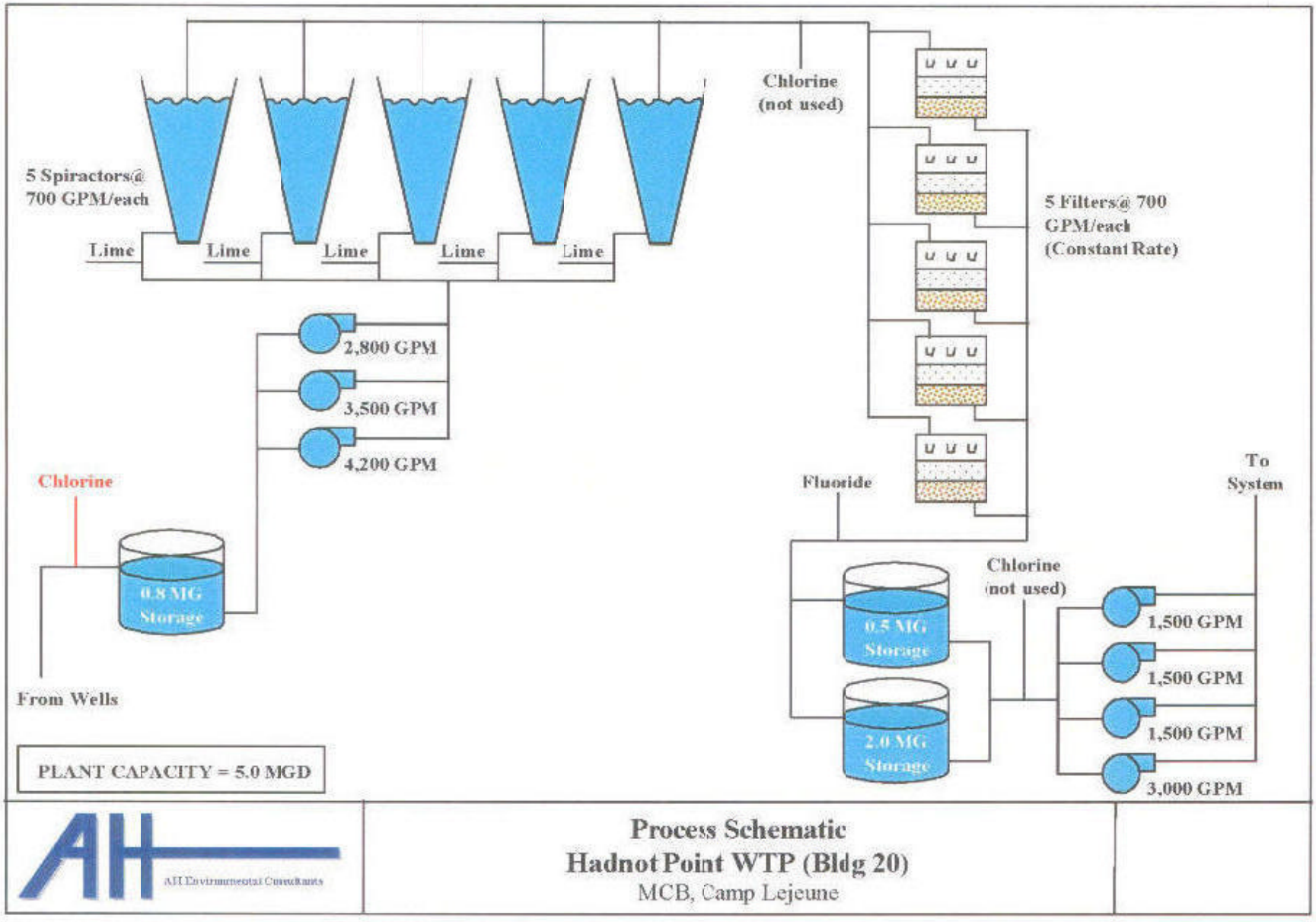
CAMP LEJEUNE WATER DISTRIBUTION SYSTEM BY SIZE WITH MATERIAL, TYPE, DATE AND WELL INSTALLATION DATE

This attachment contains a visual diagram of portions of the Camp Lejeune, NC Military Reservation.

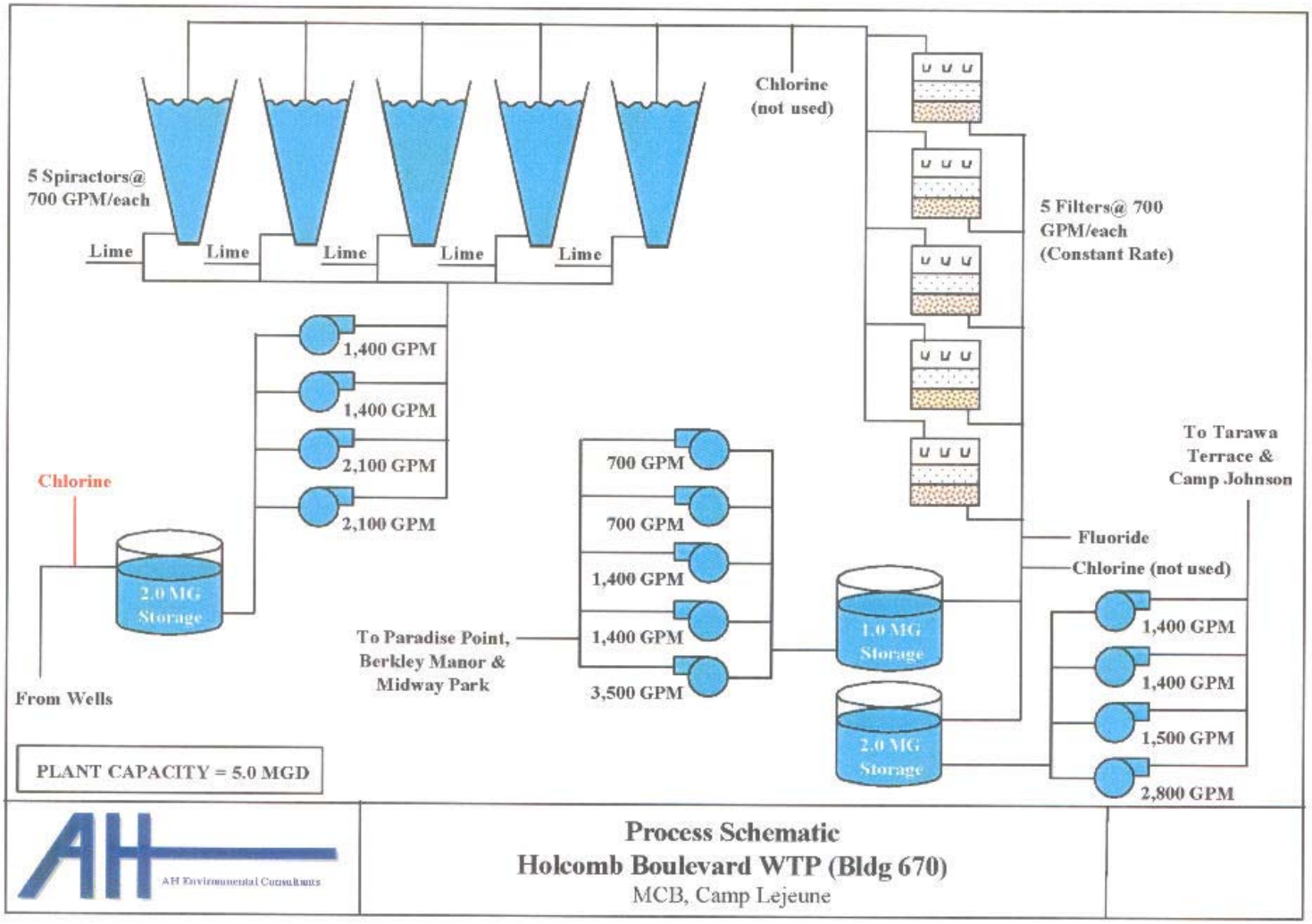
For the purpose of protecting homeland security and critical infrastructure from domestic and transnational terrorism, this will not be displayed on the Internet.

Exemption 7(F) of the Freedom of Information Act (Title V, United States Code, Section 552(b)(7)(F)) permits the withholding of information necessary to protect the physical safety of military personnel stationed aboard military installations. This exemption provides broad authority to withhold information when disclosure of such information could reasonably be expected to endanger life or physical safety. –

ATTACHMENT I


5 Spiractors@
700 GPM/each
Lime
Lime
Lime
Lime
Lime
Chlorine
(not used)
5 Filters@ 700
GPM/each
(Constant Rate)
2,800 GPM
3,500 GPM
4,200 GPM
Chlorine
0.8 MG
Storage
From Wells
Fluoride
To
System
Chlorine
(not used)
0.5 MG
Storage
2.0 MG
Storage
1,500 GPM
1,500 GPM
1,500 GPM
3,000 GPM
PLANT CAPACITY = 5.0 MGD
AH Environmental Consultants
Process Schematic
Hadnot Point WTP (Bldg 20)
MCB, Camp Lejeune

ATTACHMENT J


5 Spiractors@
700 GPM/each
Lime
Lime
Lime
Lime
Lime
Chlorine
(not used)
5 Filters@ 700
GPM/each
(Constant Rate)
1,400 GPM
1,400 GPM
2,100 GPM
2,100 GPM
Chlorine
2.0 MG
Storage
From Wells
700 GPM
700 GPM
1,400 GPM
1,400 GPM
3,500 GPM
To Paradise Point,
Berkley Manor &
Midway Park
1.0 MG
Storage
2.0 MG
Storage
To Tarawa
Terrace &
Camp Johnson
Fluoride
Chlorine (not used)
1,400 GPM
1,400 GPM
1,500 GPM
2,800 GPM
PLANT CAPACITY = 5.0 MGD
AH Environmental Consultants
Process Schematic
Holcomb Boulevard WTP (Bldg 670)
MCB, Camp Lejeune

ATTACHMENT K

Pre-1984 Camp Lejuene Well Data

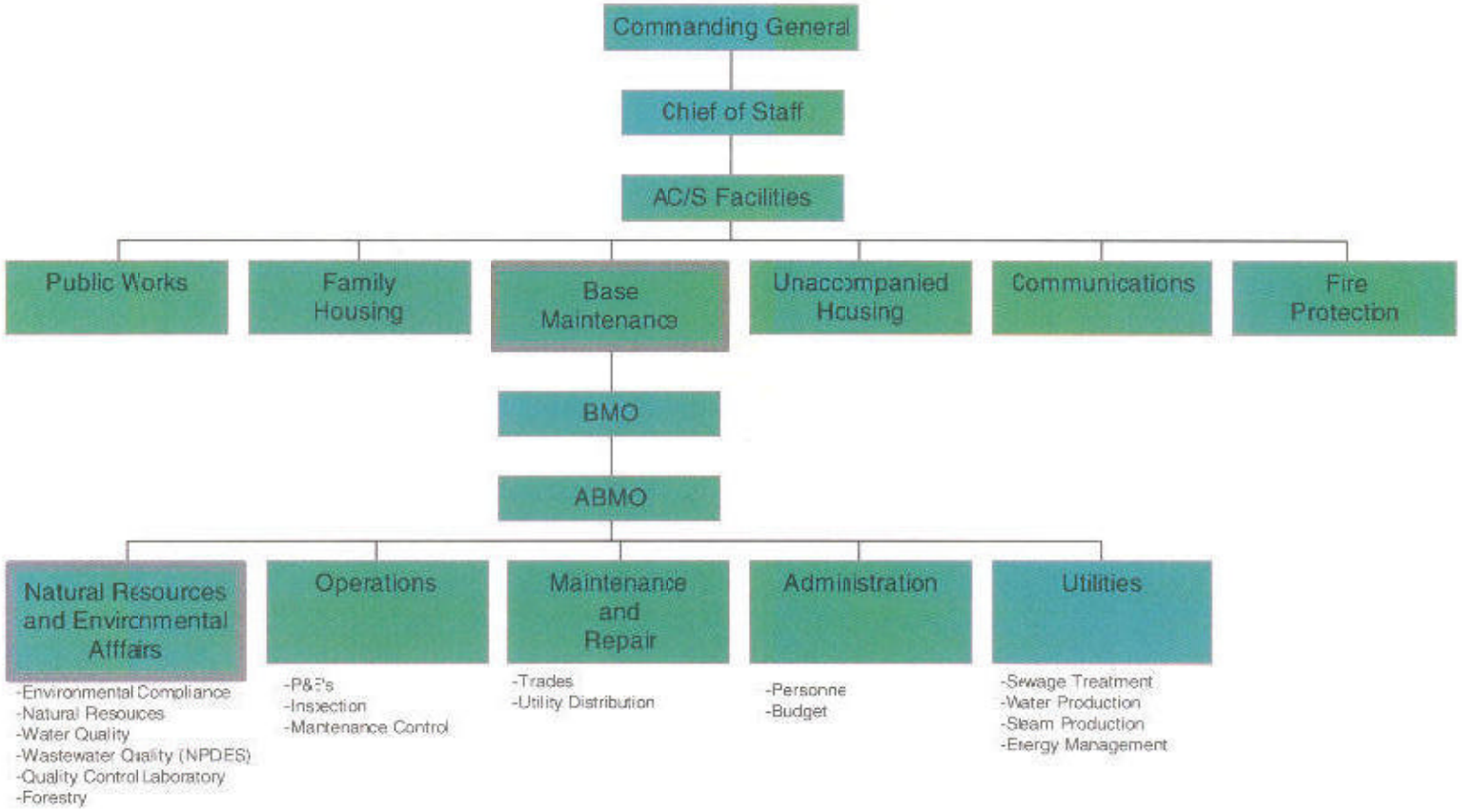
Well Name	Installation Date	Yield (Gallons per Minute)
HADNOT POINT		
HP-37 (H-37)	<1942	
HP-604	<1942	
HP-624	<1965	
HP-627 (HP-661)	<1965	175
HP-628	<1965	
HP-629	<1965	
HP-630	<1965	
HP-656	<1994	
HP-601(HP20-601)	1941	
HP-602	1941	154
HP-603	1941	150
HP-606	1941	345
HP-608	1941	208
HP-609	1942	150
HP-610	1942	214
HP-611	1942	
HP-611	1942	144
HP-612	1942	170
HP-613	1942	250
HP-614	1942	240
HP-615 (HP20-615)	1942	
HP-616	1942	167
HP-620	1942	280
HP-621	1942	284
HP20-626	1953	
HP-632	1957	349
HP-633	1959	250
HP-634	1959	219
HP-635 (HP20-635)	1959	200
HP-636	1959	154
HP-637	1968	130
HP-638	1968	201
HP-639	1968	
HP-640	1969	290
HP-651	1971	242
HP-641	1972	315
HP-642	1972	156
HP-652	1972	200
HP-653	1978	197
HP-654	1978	200
HP-625	1980	
HP-655	1980	
HP-614	1982	
HP-621	1982	284
HP-623 (HP-611)	1982	300
HP-629	1982	200
HP-638	1982	
HP-660	1983	150
HP-661	1983	175
HP-5186	1984	250
HP-607	1984	289
HP-622	1984	310
HP-628	1984	143
HP-662	1984	200

Pre-1984 Camp Lejuene Well Data

Well Name	Installation Date	Yield (Gallons per Minute)
HOLCOMB BOULEVARD		
HP-LCH 4007	1942	250
LCH 4006 HM1 (HP20-LCH1)	1942	272
HP-647	1970	302
HP-645	1971	192
HP-646 (HP-670-646)	1971	425
HP-649	1971	100
HP-643	1972	269
HP-644 (HP-670-644)	1972	230
HP-648 (HP-670-648)	1972	227
HP-650	1972	480
HP-619	1977	176
HP-630 (HB-650 , HP-670-650	1977	480
LCH-4009	1984	450
MONTFORD POINT		
M-627 (M-627 Z-4)	<1942	
M-630 (M-244)	<1975	
CCC-1	1941	
CCC-2	1942	
M-142 (M178-Z1)	1942	210
M-243 (M178-Z2)	1942	
M-628 (M178-Z5)	1942	
M-168 (M178-Z6)	1953	
M-197 (M-178-197)	1970	
M-629	1975	
M-243 (M178-Z2)	1980	
M-267	1981	
M-161(M-168)	1983	
TARAWA TERRACE		
TT28	<1965	
TT30	<1965	100
TT31	<1965	145
TT31	<1965	145
TT45	<1965	
TT55	<1965	
TT23	<1984	
TT26 (TT38-1)	1960	200
TT52 (TT38-9)	1961	300
TT53	1961	350
TT54 (TT38-11)	1961	200
TT67 (TT38-67)	1971	168
TT38-31	1973	
TT25	1980	

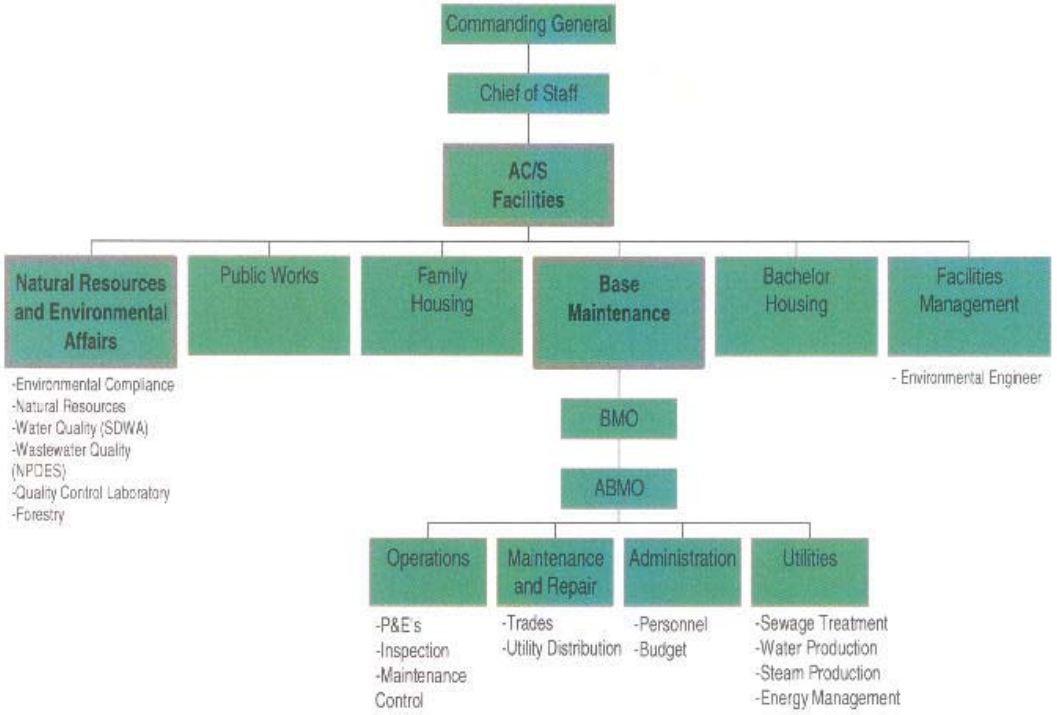
ATTACHMENT L

Pre-October 1982



ATTACHMENT M

Post-October 1982 to 1989



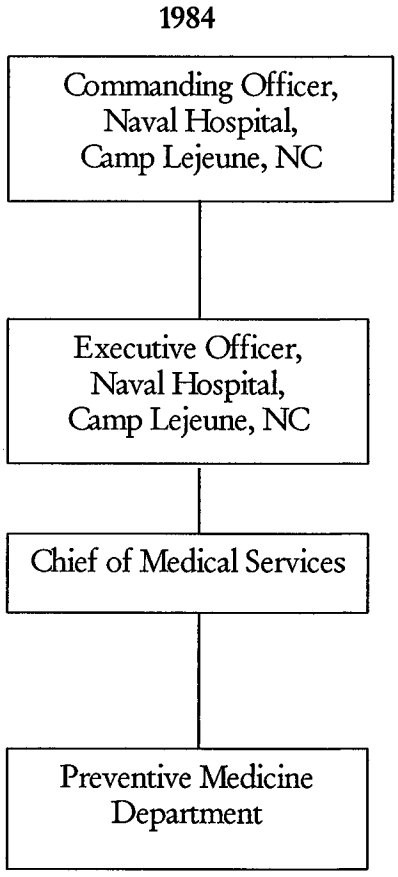
ATTACHMENT N

Organization of Preventive Medicine, Naval Hospital and MCB, Camp Lejuene

Prior to 1984: Unknown to current staff

In 1984: Naval Hospital was a tenant command to MCB, Camp Lejeune, NC (i.e., The CO, Naval Hospital did not report to the Base CG.)

The flowchart in regards to Preventive Medicine's relationship to the Naval Hospital for 1984 is indicated below:



In 1989, under restructuring the CG, MCB was assigned as the Reporting Line Senior for the CO, Naval Hospital.
Current staff believes that functional responsibilities in 1984 were the same as today, even though reporting seniors have changed.

ATTACHMENT O

ACRONYMS

A-C	Asbestos-Cement
AC/S	Assistant Chief of Staff
ANPRM	Advance Notice of Proposed Rule Making
ATSDR	Agency for Toxic Substances and Disease Registry
AWWA	American Water Works Association
BUMED	Bureau of Naval Medicine
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CHPPM	U. S. Army Center for Health Promotion and Preventive Medicine
CL	Camp Lejeune
CNS	Central Nervous System
CS	Confirmation Study
CWA	Clean Water Act
DoD	U. S. Department of Defense
EPA	U. S. Environmental Protection Agency
FOIA	Freedom of Information Act
FWPCA	Federal Water Pollution Control Act
GC/MS	Gas Chromatograph/Mass Spectrometer
HHS	U. S. Department of Health and Human Services
IARC	International Agency for Research on Cancer
IAS	Initial Assessment Study
IIMEF	Command Element, II Marine Expeditionary Force
JAWWA	Journal of the American Water Works Association
LANTDIV	Atlantic Division, Naval Facilities Engineering Command
MAGTF	Marine Air-Ground Task Force
MCB	Marine Corps Base
MCL	Maximum Contaminant Level
MEF	Marine Expeditionary Force
MGD	Million Gallons per Day
NACIP	Naval Assessment and Control of Installation Pollutants
NAS	National Academy of Sciences
NCDEM	North Carolina Division of Environmental Management
NCDENR	North Carolina Department of Environmental and Natural Resources
NCDHS	North Carolina Department of Health Services
NEHC	Navy Environmental Health Center
NIPDWR	National Interim Primary Drinking Water Regulation
NOV	Notice of Violation
NPDWR	National Primary Drinking Water Regulation
NREAD	Natural Resources and Environmental Affairs Division
PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethylene (also known as Perchloroethylene)
RMCL	Recommended Maximum Contaminant Level
SDWA	Safe Drinking Water Act

SNARL	Suggested No Adverse Response Level
SOC	Synthetic Organic Chemical
TCE	Trichloroethylene
THM	Trihalomethane
TTHM	Total Trihalomethanes
USAEHA	U. S. Army Environmental Hygiene Agency
USGS	U. S. Geological Survey
USMC	U. S. Marine Corps
VOC	Volatile Organic Compound
WHO	World Health Organization

ATTACHMENT P

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